



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

On the Progressive Paralysis of the Different Classes of Nerve-cells in the Superior Cervical Ganglion. J. N. LANGLEY and W. LEE DICKINSON, Proc. Roy. Soc., Vol. 47, March, 1890.

Pursuing their previous studies on the paralysis of the nerve-cells in the superior cervical ganglion by nicotin, (see review in AMERICAN JOURNAL OF PSYCHOLOGY, Vol. III. p. 372), the authors present in this paper evidence to show that the various effects of stimulation of the cervical sympathetic nerve are unequally influenced by the action of this drug, and therefore conclude that the different classes of nerve cells concerned, are not affected to the same extent at the same time. They worked with rabbits, cats and dogs, and the induction current was applied to the sympathetic nerve on the distal side of the ganglion so that the impulse must pass the ganglion to produce its effect. They recognize the following reactions upon stimulation of the nerve: (1), Retraction of the nictitating membrane; (2), Protrusion of the eyeball and opening of the eye; (3), Turning the eye (under certain conditions); (4), Dilation of the pupil; (5), Constriction of the small arteries of the ear, conjunctiva, and of various other parts of the head; (6), In the dog, dilation of the small arteries of the gums, lips and some other parts of the head; (7), Secretion of saliva. In making these experiments, the nicotin was given by intravenous injection, either in doses sufficient to abolish all the reactions from the sympathetic and then the order in which the various reactions returned upon recovery from the drug was noted; or the reverse process was pursued. Smaller doses being given, and the order in which the reactions were abolished, noted. The order of recovery was found to be the reverse of the order of paralysis. As bearing on the immediate question it may be repeated that Langley had previously found that in the cat the secretory cells on the course of the cervical sympathetic were more easily paralyzed than the secretory cells on the course of the *chorda tympani*; that in the dog the reverse was the case; finally that on the course of the *chorda tympani*, the cells associated with the secretory fibers were paralyzed before those associated with the vaso-dilator fibers. In the final tables the effects of stimulating the sympathetic are arranged for each animal,—rabbit, cat, dog,—in the order in which they disappear under nicotin. The absolute time intervals are short, not more than a few minutes as a rule, and many of the effects disappear apparently at the same time, but some of the effects are regularly abolished sooner than others. In the rabbit for example the withdrawal of the nictitating membrane disappears first and the constriction of the blood vessels of the ear last. In the cat the first is the secretion from the submaxillary gland, and the last, the withdrawal of the nictitating membrane. In the dog the dilation of the arteries of the bucco-facial region is first, and the last the constriction of the blood-vessels of the submaxillary gland. While the authors admit that tonic stimuli reaching the several regions by nerve fibers other than the sympathetic may influence their results, they nevertheless consider the differences in reaction just mentioned to be due to an unequal paralyzing action of nicotin upon the nerve cells of the superior cervical ganglion.

Ueber den Nachweis der Unermüdlichkeit des Säugethiernerven. H. P. BOWDITCH. Archiv f. Anatomie und Physiologie, Physiol. Abthl. 1890.

In a previous investigation the author showed that prolonged stimulation of a motor nerve did not cause fatigue in it. The strength of stimulus was such as to tetanize the normal muscle with which the nerve was connected, and the muscle was then kept quiet by the action of curare while the stimulus was continuously acting on the nerve. On recovery from the curare the final tetanus was preceded by single